

## [CLAIMS]

- 1 1. A feline onychectomy surgical method using a laser  
2 cutting instrument, the method comprising:  
3 (a) forming a first circumferential incision in the  
4 epidermis near the edge of the ungual crest of the claw,  
5 thereby severing at least some of the epidermis from the  
6 ungual crest;  
7 (b) applying cranial traction to the epidermis severed  
8 from the ungual crest to displace the distal edge of the  
9 epithelium cranially;  
10 (c) incising the extensor tendon near its insertion on  
11 the ungual crest;  
12 (d) incising the synovium of the PII-PIII joint;

13 (e) applying traction to the claw in the palmar  
14 direction for disarticulating the PII-PIII joint;

15 (f) ablating the medial and lateral collateral  
16 ligaments;

17 (g) incising the digital flexor tendon; and

18 (h) incising the subcutaneous tissues of the pad of  
19 the second phalanx.

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1 2. The surgical method in accordance with claim 1, wherein  
2 the steps of incising and ablating further comprise  
3 directing the laser beam in a substantially palmar  
4 direction from a laser beam source positioned substantially  
5 dorsally of the tissue being incised.

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1 3. The surgical method in accordance with claim 2, further  
2 comprising forming a second circumferential incision in the  
3 epidermis cranial to the first circumferential incision,  
4 thereby severing at least some of the subcutaneous fascia  
5 from the ungual crest.

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1 4. The surgical method in accordance with claim 3, wherein  
2 the second circumferential incision is formed about three  
3 millimeters cranial to the first circumferential incision.

1 5. The surgical method in accordance with claim 4, further  
2 comprising applying cranial traction to the epidermis  
3 severed from the ungual crest for covering the onychectomy  
4 site.

1 6. A feline onychectomy surgical method using a laser  
2 cutting instrument, the method comprising:

3 (a) forming a first circumferential incision with the  
4 laser in the epidermis at the edge of the ungual crest of  
5 the feline's claw, thereby severing at least some of the  
6 epidermis from the ungual crest; and then

7 (b) applying cranial traction to the epidermis severed  
8 from the ungual crest to displace the distal edge of the  
9 epidermis cranially; and then

10 (c) forming a second circumferential incision in the  
11 epidermis about 3 millimeters cranial to the first

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12 circumferential incision, thereby severing at least some of  
13 the subcutaneous fascia from the ungual crest; and then

14 (d) incising the extensor tendon near its insertion on  
15 the ungual crest by directing the laser beam in a  
16 substantially palmar direction from a laser beam source  
17 positioned substantially dorsally of the extensor tendon;  
18 and then

19 (e) incising the synovium of the PII-PIII joint; and  
20 then

21 (f) applying traction to the claw in the palmar  
22 direction for disarticulating the PII-PIII joint; and then

23 (g) ablating the medial and lateral collateral  
24 ligaments by directing the laser beam in a substantially  
25 palmar direction from the source positioned substantially  
26 dorsally of the ligaments; and then

27 (h) incising the digital flexor tendon by directing  
28 the laser beam in a substantially palmar direction from the  
29 source positioned substantially dorsally of the flexor  
30 tendon; and then

31 (i) incising the subcutaneous tissues of the pad of  
32 the second phalanx by directing the laser beam in a

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33 substantially palmar direction from the source positioned  
34 substantially dorsally of the subcutaneous tissues of the  
35 pad of the second phalanx; and then  
36 (j) applying palmar traction to the epidermis severed  
37 from the ungual crest for covering the onychectomy site.

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